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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/847,466	05/01/2001	Gerrit J. van den Engh	UW - van den Engh	7465

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EXAMINER

LEE, SHUN K

ART UNIT PAPER NUMBER

2878

DATE MAILED: 07/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/847,466

Applicant(s)

VAN DEN ENGH, GERRIT J.

Examiner

Shun Lee

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-67 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-67 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Oath/Declaration

2. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:
The full name of each inventor (family name and at least one given name together with any initial) has not been properly set forth.

It is noted that the inventor has been listed as "Gerrit J. Van den Engh" whereas the notification filed 16 January 2002 reveals this is in error.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 6b (pg. 17). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the radiation beams orthogonal to each other (e.g., claims 15, 25, and 38) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

5. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

6. The abstract of the disclosure is objected to because of the language. Correction is required. See MPEP § 608.01(b).

7. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 16, 26, 27, 31, 38, 40, 41, 48-50, and 65-67 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 16 recites the limitation "placement" in line 3 but fails to particularly point out what is placed (e.g., surface of an object) at an angle β .

Claim 26 recites the limitation "placement" in line 3 but fails to particularly point out what is placed (e.g., an object surface) at an angle β .

Claim 31 recites the limitation "said radiation reflecting means" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 38 recites the limitation "the means for changing the direction of propagation" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

Claim 40 recites the limitation "said means for changing direction" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 40 recites the limitation "placement" in line 3 but fails to particularly point out what is placed (e.g., an object surface) at an angle β .

Claim 41 recites the limitation "said direction changing means" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 48, the phrase "optionally" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention.

10. Claims 33-47 and 62-64 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: a radiation beam to other elements in the claim such as the radiation from said flow chamber (it is suggested that "a radiation beam" should probably be --said radiation from said flow chamber--).

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1-3, 19-22, 28, 30-32, 51-53, 55, 59, and 61 are rejected under 35 U.S.C. 102(b) as being anticipated by Walker *et al.* (US 3,813,172).

In regard to claim 1, Walker *et al.* disclose (Figs. 1-3) a radiation directing device, comprising a screen (28) having a mirrored surface (46) interrupted by one or more pin holes (43, 47, 48, 49, 50) that pass through said screen (28), said pin holes (43, 47, 48, 49, 50) having an elliptical shape.

In regard to claim **2** which is dependent on claim 1, Walker *et al.* also disclose (Figs. 2) that said mirrored surface (46) comprises a planar surface (46).

In regard to claim **3** which is dependent on claim 2, Walker *et al.* also disclose (Fig. 2) that said pin holes (43, 47, 48, 49, 50) are disposed at a substantially non-orthogonal angle with respect to said planar surface (46).

In regard to claims **19** and **28**, Walker *et al.* disclose (Figs. 1-3) an apparatus comprising:

- (a) a screen (28) having a mirrored surface (46) interrupted by one or more pin holes (43, 47, 48, 49, 50) passing through said screen (28), said one or more pin holes (43, 47, 48, 49, 50) have an elliptical shape; and
- (b) a means (column 5, line 59 to column 6, line 5) for detecting radiation reflected by said mirrored surface (46), wherein said detecting means determines a position of a radiation beam relative to said pin hole (43, 47, 48, 49, 50).

In regard to claim **20** which is dependent on claim 19, Walker *et al.* is applied as in claim 2.

In regard to claim **21** which is dependent on claim 19, Walker *et al.* is applied as in claim 3.

In regard to claim **22** which is dependent on claim 19, Walker *et al.* also disclose (Fig. 1) that said mirrored surface (46) is placed to reflect a radiation beam at an angle 2 times β .

In regard to claim **30** which is dependent on claim 19, Walker *et al.* also disclose (Figs. 1-3) a means (34) for collimating radiation reflected by said mirrored surface (46), said collimating means (34) placed to direct radiation to said radiation detecting means.

In regard to claim **31** which is dependent on claim 19 in so far as understood, Walker *et al.* also disclose (Figs. 1-3) a means (33) for directing radiation reflected by said mirrored surface (46) to said radiation detecting means.

In regard to claim **32** which is dependent on claim 19, Walker *et al.* also disclose (Figs. 1-3) a means (26) for directing radiation to said screen (28).

In regard to claim **51**, Walker *et al.* disclose (Figs. 1-3; column 3, lines 10-34) a radiation directing device, comprising a mirrored surface (46) interrupted by one or more pin holes (43, 47, 48, 49, 50), said pin holes (43, 47, 48, 49, 50) having an elliptical shape, wherein said mirrored surface (46) prevents passage of radiation in the UV, VIS or IR regions of the spectrum.

In regard to claim **52**, Walker *et al.* disclose (Figs. 1-3; column 4, lines 1-18) a radiation directing device, comprising a metal coating (46) of a mirror, said metal coating (46) interrupted by one or more pin holes (43, 47, 48, 49, 50), said pin holes (43, 47, 48, 49, 50) having an elliptical shape.

In regard to claims **53** and **55** which are dependent on claim 1, Walker *et al.* also disclose (Figs. 1-3) that said pin hole (43, 47, 48, 49, 50) comprises a material (e.g., glass; column 3, lines 10-34; column 4, lines 1-18) transparent to radiation in the UV, VIS or IR regions of the spectrum.

In regard to claim **59** which is dependent on claim 19, Walker *et al.* is applied as in claim 53.

In regard to claim **61** which is dependent on claim 59, Walker *et al.* is applied as in claim 55.

13. Claim 48 is rejected under 35 U.S.C. 102(b) as being anticipated by Piwonka-Corle *et al.* (US 5,608,526).

In regard to claim **48** in so far as understood, Piwonka-Corle *et al.* disclose (column 13, line 64 to column 14, line 35; Fig. 7) an automated system for aligning a radiation beam, comprising:

- (a) a screen having a mirrored surface interrupted by one or more pin holes passing through said screen (*i.e.*, apertured mirror 90);
- (b) a means (6) for directing a radiation beam to said screen;
- (c) a means (91) for detecting radiation reflected by said mirrored surface, wherein said detecting means (91) determines a position of a radiation beam relative to said pin hole; and
- (d) a computer systems (processor 100 in Fig. 8) controlling movement of said positioning device (column 14, lines 19-27), said computer system receiving a signal from said detection means (91) and sending a processed output signal to said positioning device, wherein said output signal directs the movement of said positioning device.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 4, 6, 7, 23, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker *et al.* (US 3,813,172).

In regard to claim 4 which is dependent on claim 1, the radiation directing device of Walker *et al.* lacks an explicit description that the major axis of said elliptical pin holes is about 0.1 to 2 mm. However, Walker *et al.* teach (column 4, lines 50-52) that the area of the apertures (*i.e.*, pin holes) can be varied in order to increase or decrease the measuring field. Therefore it would be obvious to one of ordinary skill to select areas (*e.g.*, elliptical major axis of 0.1 to 2 mm) for the pin holes in the radiation directing device of Walker *et al.*, in order to obtain measuring fields of desired dimensions.

In regard to claim 6 which is dependent on claim 1, the radiation directing device of Walker *et al.* lacks an explicit description that said mirrored surface has dimensions of 18 mm by 18 mm. However, Walker *et al.* teach (column 5, line 62 to column 6, line 5) that the mirrored surface reflects an image of a subject in order to observe both the subject and the measuring area. Therefore it would be obvious to one of ordinary skill to select large enough dimensions (*e.g.*, 18 mm by 18 mm) for the mirrored surface in the radiation directing device of Walker *et al.*, in order to observe the entire image of a subject.

In regard to claim 7 which is dependent on claim 1, the radiation directing device of Walker *et al.* lacks an explicit description that said screen having a mirrored surface is interrupted by 3 pin holes passing through said screen. However, Walker *et al.* teach (column 2, lines 12-16) to provide a plurality of apertures (*i.e.*, pin holes) in order to increase or decrease the measuring field (column 7, lines 26-28). Therefore it would be obvious to one of ordinary skill to provide a plurality of apertures (*e.g.*, 3 pin holes) in the radiation directing device of Walker *et al.*, in order to obtain (*e.g.*, 3) measuring fields.

In regard to claim 23 which is dependent on claim 19, Walker *et al.* is applied as in claim 7.

In regard to claim 29 which is dependent on claim 19, the apparatus of Walker *et al.* lacks that said radiation detecting means further comprises an image detection device. Provision of an image detection device instead of direct visual observation is well known in the art. Therefore it would be obvious to one of ordinary skill to provide an image detection device as the radiation detecting means in the radiation directing device of Walker *et al.*, in order to determine the location of the measuring fields.

16. Claims 5, 54, and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker *et al.* (US 3,813,172) in view of Koso (US 4,801,810).

In regard to claim 5 (which is dependent on claim 1), claim 54 (which is dependent on claim 53), and claim 60 (which is dependent on claim 59), Walker *et al.* also disclose (Figs. 1-3) that said mirrored surface (*i.e.*, metallic coated mirror 46;

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column 4, lines 1-18) further comprises a metallic layer contacting a material such as glass or the like. The radiation directing device of Walker *et al.* lacks an explicit description that the mirror material comprises quartz. Mirror materials are well known in the art. For example, Koso teaches (column 3, lines 36-39) that preferred mirror materials are glass or quartz. Therefore it would be obvious to one of ordinary skill to that the metallic coated mirror in the radiation directing device of Walker *et al.* comprises a metallic layer contacting a material such as glass or quartz.

17. Claims 8-11, 13-18, 24-27, 56, and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker *et al.* (US 3,813,172) in view of Bayrock *et al.* (US 6,353,657).

In regard to claims 8, 17, and 18, Walker *et al.* is applied as in claim 1. The radiation directing device of Walker *et al.* lacks a means for changing the direction of propagation for radiation beams passing through said one or more pin holes, said direction changing means (e.g., one or more prisms) and said one or more pin holes being juxtaposed. Bayrock *et al.* teach (column 2, line 33 to column 3, line 25) to provide a direction changing means (e.g., mirrors or prisms) for changing the direction of propagation for radiation beams in order to obtain a folded optical path so as to minimize the device housing dimensions. Therefore it would be obvious to one of ordinary skill to provide direction changing means (e.g., prisms) juxtaposed to the one or more pin holes in the radiation directing device of Walker *et al.*, in order to obtain a folded optical path so as to minimize the device housing dimensions as taught by Bayrock *et al.*

In regard to claim 9 which is dependent on claim 8, Walker *et al.* is applied as in claim 2.

In regard to claim 10 which is dependent on claim 8, Walker *et al.* is applied as in claim 3.

In regard to claim 11 which is dependent on claim 8, Walker *et al.* is applied as in claim 4.

In regard to claim 13 which is dependent on claim 8, Walker *et al.* is applied as in claim 6.

In regard to claim 14 which is dependent on claim 8, Walker *et al.* is applied as in claim 7.

In regard to claim 15 which is dependent on claim 14, the radiation directing device of Walker *et al.* lacks that the means for changing the direction of propagation is placed to direct the radiation beams passing through said 2 or more pin holes orthogonal to each other. Bayrock *et al.* teach (column 2, line 33 to column 3, line 25) to provide a direction changing means (*e.g.*, mirrors or prisms) for changing the direction of propagation for radiation beams in order to obtain a folded optical path so as to minimize the device housing dimensions. Therefore it would be obvious to one of ordinary skill to provide direction changing means juxtaposed the pin holes in the radiation directing device of Walker *et al.*, in order to obtain multiple folded optical paths (*e.g.*, orthogonal optical paths) so as to minimize the device housing dimensions as taught by Bayrock *et al.*

In regard to claim **16** which is dependent on claim 14 in so far as understood, the radiation directing device of Walker *et al.* lacks that said means for changing direction further comprises placement at an angle β with respect to a line intersecting said pin holes. Bayrock *et al.* teach (column 2, line 33 to column 3, line 25) to provide a direction changing means (e.g., mirrors or prisms) for changing the direction of propagation for radiation beams in order to obtain a folded optical path so as to minimize the device housing dimensions. Therefore it would be obvious to one of ordinary skill to provide direction changing means positioned at an angle β with respect to a line intersecting the pin holes in the radiation directing device of Walker *et al.*, in order to obtain a folded optical path so as to minimize the device housing dimensions as taught by Bayrock *et al.*

In regard to claim **24** which is dependent on claim 19, Bayrock *et al.* is applied as in claim 8.

In regard to claim **25** which is dependent on claim 24, Bayrock *et al.* is applied as in claim 15.

In regard to claim **26** which is dependent on claim 23 in so far as understood, Bayrock *et al.* is applied as in claim 16.

In regard to claim **27** which is dependent on claim 26, Bayrock *et al.* is applied as in claim 8.

In regard to claim **56** which is dependent on claim 8, Walker *et al.* is applied as in claim 53.

In regard to claim **58** which is dependent on claim 56, Walker *et al.* is applied as in claim 55.

18. Claims 12 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker *et al.* (US 3,813,172) in view of Bayrock *et al.* (US 6,353,657) as applied to claim 8 above, and further in view of Koso (US 4,801,810).

In regard to claim **12** (which is dependent on claim 8) and claim **57** (which is dependent on claim 56), Koso is applied as in claim 5.

19. Claims 33-37, 42-47, 62, and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker *et al.* (US 3,813,172) in view of Altendorf (US 6,067,157).

In regard to claims **33**, **42**, and **47**, Walker *et al.* is applied as in claims 19, 28, and 32. The apparatus of Walker *et al.* lacks that the sample (24 in Fig. 1) is in a flow chamber of a flow cytometer. Flow cytometers are well known in the art. For example, Altendorf teaches (Fig. 7) a sample of particles in a flow chamber (1) of a flow cytometer and that an apertured mirror (55) is used to allow selective detection of forward angle light scattering by a sensor (40) in order to count and classify particles (column 1, lines 11-33). Therefore it would be obvious to one of ordinary skill to provide a flow chamber of a flow cytometer for the sample in the radiation directing device of Walker *et al.*, in order to selectively detect forward angle light scattering from particles so as to count and classify particles.

In regard to claim **34** which is dependent on claim 33, Walker *et al.* is applied as in claim 2.

In regard to claim **35** which is dependent on claim 33, Walker *et al.* is applied as in claim 3.

In regard to claim **36** which is dependent on claim 33, Walker *et al.* is applied as in claim 22.

In regard to claim **37** which is dependent on claim 33, Walker *et al.* is applied as in claim 7.

In regard to claim **43** which is dependent on claim 33, Walker *et al.* is applied as in claim 29.

In regard to claim **44** which is dependent on claim 33, Walker *et al.* is applied as in claim 30.

In regard to claim **45** which is dependent on claim 33, Walker *et al.* is applied as in claim 31.

In regard to claim **46** which is dependent on claim 33, Walker *et al.* also disclose (Figs. 1-3) that said radiation directing means (26) comprises a lens (26).

In regard to claim **62** which is dependent on claim 33, Walker *et al.* is applied as in claim 53.

In regard to claim **64** which is dependent on claim 62, Walker *et al.* is applied as in claim 55.

20. Claims 38-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker *et al.* (US 3,813,172) in view of Altendorf (US 6,067,157) as applied to claims 33 and 37 above, and further in view of Bayrock *et al.* (US 6,353,657).

In regard to claim **38** which is dependent on claim 37 in so far as understood, Bayrock *et al.* is applied as in claim 15.

In regard to claim **39** which is dependent on claim 33, Bayrock *et al.* is applied as in claim 8.

In regard to claim **40** which is dependent on claim 37 in so far as understood, Bayrock *et al.* is applied as in claim 16.

In regard to claim **41** which is dependent on claim 40 in so far as understood, Bayrock *et al.* is applied as in claim 17.

21. Claim 63 is rejected under 35 U.S.C. 103(a) as being unpatentable over Walker *et al.* (US 3,813,172) in view of Altendorf (US 6,067,157) as applied to claim 62 above, and further in view of Koso (US 4,801,810).

In regard to claim **63** which is dependent on claim 62, Koso is applied as in claim 5.

22. Claims 48, 65, and 67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker *et al.* (US 3,813,172) in view of Piwonka-Corle *et al.* (US 5,608,526).

In regard to claim **48** in so far as understood, Walker *et al.* is applied as in claims 19 and 32. The system of Walker *et al.* lacks a computer systems controlling movement of a positioning device, said computer system receiving a signal from said detection means and sending a processed output signal to said positioning device, wherein said output signal directs the movement of said positioning device. Piwonka-Corle *et al.* teach (column 13, line 64 to column 14, line 35) a computer system receiving a signal

from the detection means and sending a processed output signal to a positioning device (which can for example be attached to a sample stage 63 in Fig. 8), wherein the output signal directs the movement of the positioning device so as to properly position a measuring beam at a correct focus. Therefore it would be obvious to one of ordinary skill to provide a computer controlling a positioning device in the system of Walker *et al.*, in order to properly position a measuring beam at a correct focus as taught by Piwonka-Corle *et al.*

In regard to claim 65 which is dependent on claim 48, Walker *et al.* is applied as in claim 53.

In regard to claim 67 which is dependent on claim 65, Walker *et al.* is applied as in claim 55.

23. Claims 49 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker *et al.* (US 3,813,172) in view of Piwonka-Corle *et al.* (US 5,608,526) as applied to claim 48 above, and further in view of Altendorf (US 6,067,157).

In regard to claims 49 and 50 which are dependent on claim 48, Altendorf teaches (Fig. 7) that a flow cytometer comprises a means (14) for directing radiation from a radiation source (10) to a flow chamber (1). Altendorf is applied as in claim 33. The modified system of Walker *et al.* that the flow chamber and/or the radiation directing means is attached to the positioning device. Piwonka-Corle *et al.* teach (column 13, line 64 to column 14, line 35) a computer system receiving a signal from the detection means and sending a processed output signal to a positioning device (which can for example be attached to a sample stage 63 in Fig. 8), wherein the output signal directs

the movement of the positioning device so as to properly position a measuring beam at a correct focus. It is noted that a correct focus occurs when the beam focus location coincidences with the sample location (see for example fig. 7 of Piwonka-Corle *et al.*). Thus to bring into coincidence the beam focus location and the sample location, the beam and/or the sample needs repositioning. Clearly repositioning of the beam occurs when a radiation directing means is repositioned. Therefore it would be obvious to one of ordinary skill to provide a computer controlling a position of the sample (e.g., a flow chamber) and/or a radiation directing means in the system of Walker *et al.*, in order to properly position a measuring beam at a correct focus as taught by Piwonka-Corle *et al.*

24. Claim 66 is rejected under 35 U.S.C. 103(a) as being unpatentable over Walker *et al.* (US 3,813,172) in view of Piwonka-Corle *et al.* (US 5,608,526) as applied to claim 65 above, and further in view of Koso (US 4,801,810).

In regard to claim 66 which is dependent on claim 65, Koso is applied as in claim 5.

Conclusion

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shun Lee whose telephone number is (703) 308-4860. The examiner can normally be reached on Tuesday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on (703) 308-4881. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

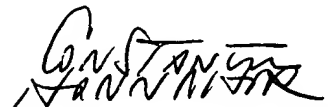
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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

SL
July 17, 2002


CONSTANTINE HANNAHER
PRIMARY EXAMINER
GROUP ART UNIT 2878